

EQ: What are the relationships of parts of circles, and how can they be used?

A circle is all of the points that are the same distance from the _____.

That distance is known as the _____.

A chord is a line segment inside a circle where each _____ is on the circle. The _____ is a special chord that also goes through the center.

A central angle is one that has its _____ at the center of the circle.

A central angle creates a _____ arc and a _____ arc. The minor arc is the part of the edge of the circle _____ the central angle (the smaller part) and the major arc is the part of the edge of the circle _____ the central angle (the larger part).

A semicircle is _____ a circle.

A tangent line touches the circle at exactly _____. It will be _____ to the radius that touches that point.

An inscribed angle has its vertex on the _____ of the circle.

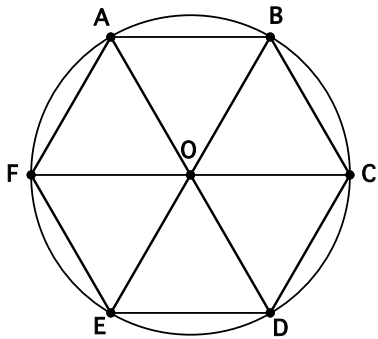
The *degree measure* of a minor arc is the same as the _____ that contains it.

The *degree measure* of a major arc equals $360 -$ the degree measure of its minor arc.

Use this formula to find the *length* of an arc: _____ where r is the radius and D is the degree measure of the arc.

The measure of an inscribed angle is _____ the measure of the arc it contains.

Example 1: The figure shows a regular hexagon inscribed in circle O. The radius is 6 cm. (Not drawn to scale)

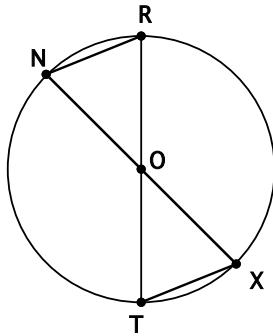


a. What is the measure of \widehat{CFD} ?

b. What is the length of \widehat{AC} ?

c. What is the length of \widehat{AEC} ?

Example 2: The diameter of circle O is 16 in. Triangles NOR and TOX are equilateral. (Not drawn to scale)

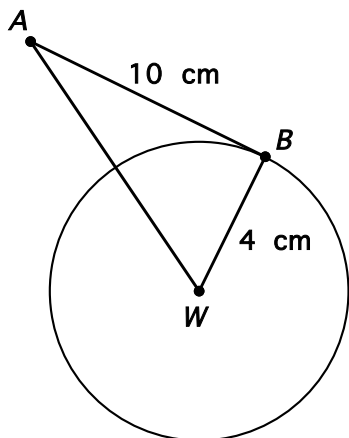


a. What is the measure of \widehat{RX} ?

b. What is the length of \widehat{RX} ?

c. What is the measure of \widehat{NT} ?

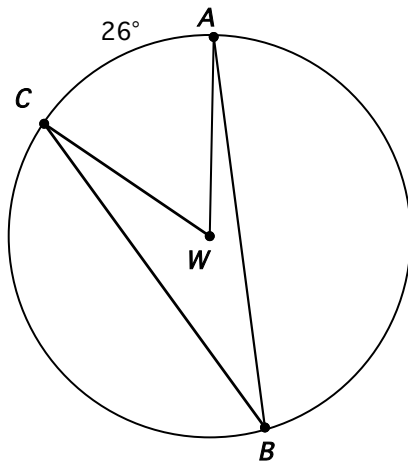
Example 3: \overline{AB} is tangent to circle W at point V. (Not drawn to scale)



a. Find the $m\angle WBA$.

b. Find AW .

Example 4: $\angle ABC$ is inscribed in circle G . What is the measure of $\angle ABC$? What is the measure of $\angle AWC$? (Not drawn to scale)



Example 5: A circle graph shows the percentage of students that are male vs. female at A-C. Currently, there are 419 males and 379 females enrolled in the secondary school. Approximately, what percent is male? Female? What degree measure would represent the males in a circle graph? Complete a circle graph of the data.

